

head, and the components of the broken (left) horn were of exactly the same dimensions as the intact (right) horn. It therefore seems clear that the break occurred when the bird was fully grown, though some time before it died. The problem remains as to how this injury was caused. There was absolutely no indication of any other injury to the bird's head apart from the displacement of a narrow band of fibres of *M. serpihyoideus*, noted above. It seems most likely that this accident was the result of some abnormal event in the process of feeding, but it is difficult to visualise what this might have been. The horns may be vulnerable to such damage during swallowing of an exceptionally large object, as this would cause extensive downward displacement of the whole hyoid apparatus and for much of their length the horns would lose contact with the ventral edge of the mandible and *M. depressor mandibulae*. Deprived of this support dorsally, it is conceivable that the horn might buckle under the contraction force of *M. geniohyoideus*, particularly if the normal action of this muscle (pulling the tongue forward) were opposed by the food object in the mouth.

One conclusion that can be safely drawn is that we do not yet sufficiently understand the actions of the avian tongue and its musculature in life. However, this unusual injury certainly deserves consideration in any future analysis of these actions.

References:

- Burton, P. J. K. 1969. *Anatomy and adaptive modifications of the feeding apparatus in waders (Aves: Charadrii)*. Ph.D. thesis, University of London. (In prep.) Modified version of the above.
- Pomeroy, D. E. 1962. Birds with abnormal bills. *Brit. Birds*, 55 (2), 49-72.

Escapes of *Psittacula krameri* and *Agapornis* spp. breeding in Kenya

by G. R. Cunningham-van Someren

Received 10th June, 1969

In recent years there has been quite a trade in and export of cage birds, principally from Tanzania but also from Kenya and Uganda, and there are many private aviary collections which include exotic species in the general area of Nairobi, Kenya. It is inevitable that some species, not indigenous in Kenya, should have escaped. Parrots, parakeets and lovebirds have been particularly popular as cage birds, together with weavers and finches.

The observation which has prompted this note has been the finding of the Rose-ringed Parakeet *Psittacula krameri* (Scopoli) breeding in the Nairobi National Park. My wife and son reported seeing a green parakeet with a long tail in the Park some weeks ago, and last week again saw four birds in the vicinity of the first sighting. To-day (2nd June, 1969), at the scene of the second sighting, we found a pair of *P. krameri* with a nest in a hole, some thirty feet up in a dead limb of a hardwood tree *Brachylaena butchinsii*. The hole was roughly round with somewhat ragged edges and larger than the holes made by any local barbet or woodpecker. We watched and photographed the birds for over two hours, but did not see the other two birds, which could possibly have been the offspring of the pair we had under observation.

Enquiries have shown that a dealer and collector had imported a few

birds from India, the former some pairs eight years ago, and the latter more recently. It is not possible at present to establish the race of the Park birds, but there is no evidence that they have come from Zanzibar, where the Indian race *P. k. borealis* (Neumann) has been introduced (Mackworth-Praed & Grant, 1952). There is no earlier record of the species from Kenya, and in Uganda it is only known from Bwamba and Masindi (van Somerens, 1949). Yet there seems no reason why *P. k. parvirostris* (Souancé) should not spread up the Blue Nile into Ethiopia, or up the White Nile into Uganda, or for the western *P. k. krameri* to spread further east in Uganda. The Nairobi National Park birds are thus most likely to be escapes, or the progeny of escapes, of imported Indian birds.

Neither Mackworth-Praed & Grant (1952) nor Cave & Macdonald (1955) give breeding records for the Sudanese *P. k. parvirostris*. In the Sennar area, Blue Nile, the bird is very common, and flocks of 20 to 30 can be seen in riverine forest and in sorghum fields, where they do considerable damage when the heads are ripening. Breeding takes place in September to November, and nests are in holes in trees. One tree, an old dead fig, had two nest holes, and these were occupied by a pair each September over a period of six years, between 1960 and 1966, when the tree was cut down. This tree also had nest holes of a barbet and a woodpecker. No attempt was made to investigate the nests, since photography was my main object. This parakeet was frequently seen as a cage bird in Khartoum and elsewhere, and I was informed that regular collection of its young, and of *Poicephalus meyeri* (Cretzschmar), was undertaken for the local cage-bird trade.

Two introduced lovebirds are now established as breeding species in Kenya. These are *Agapornis personata* Reichenow and *A. fischeri* Reichenow, both having been introduced from Tanzania, where at one time they were trapped in numbers for export to Europe. *A. personata* is now breeding in the residential areas of Nairobi, and small parties can be seen in gardens. They, like *Poicephalus gularis* (Jardine), have taken to feeding on flowers, and probably take seed of the Australian exotic *Grevillia robusta*. *A. fischeri*, particularly at Lake Naivasha, can be found in small noisy flocks of up to 15 birds among the large lake-side *Acacia* trees. Nesting is in holes or broken rotten branch ends, and one record is of a pair making use of an old weaver's nest.

Escapes of both species have been seen at widely distributed points. At Namanga, on the border between Kenya and Tanzania, just north of the natural range of *A. personata*, Major Gethin kept large numbers of both, and he (pers. comm.) reports many escapes, since "they are voracious 'eaters' of any timber used in the construction of the aviary". However, he confirms that over many years he never saw any of the escapes living or breeding in the area, similarly with escapes of the Budgerigar *Melopsittacus undulatus* (Shaw), and suggests they "fell victim to hawks or found insufficient feeding in the area and moved out". In his opinion this is due to lack of suitable grass species as food, as the area is heavily grazed by Masai cattle and there is seldom much grass except in good rain years. Major Gethin found a drowned *A. fischeri* in a watertank at Ololua, some 12 miles from Nairobi in an area of open grasslands with *Acacia* and riverine forest.

Mackworth-Praed & Grant (1952) mention that *A. personata* has been introduced to Dar-es-Salaam, and *fischeri* to Tanga, where they evidently breed successfully. It is remarkable that neither of these species has spread

north from their curiously restricted natural ranges on the interior plateau of Tanzania, where they inhabit grassland with scattered trees, breeding in baobabs (Moreau, 1948). Yet local escapes at Nairobi, Dar-es-Salaam and elsewhere are able to survive. More field work is required on parrots and parakeets generally to ascertain feeding requirements, breeding, distribution, etc. Published information is scanty, and distributions often ill-defined. The status and distribution of the various indigenous forms in Kenya could be affected, should escapes become adapted and spread, as may already be happening. It is important to ascertain the factors which prevent the spread of indigenous forms but might allow escapes to do so.

Thanks are due to C. W. Benson for assistance in finalising this note.

References:

- Cave, F. O. and Macdonald, J. D. 1955. *Birds of the Sudan*. Oliver & Boyd, Edinburgh and London.
- Mackworth-Praed, C. W. and Grant, C. H. B. 1952. *Birds of eastern and north-eastern Africa*, 1. Longmans, Green & Co., London.
- Moreau, R. E. 1948. Aspects of evolution in the parrot genus *Agapornis*. *Ibis*, 90: 206-239, 449-460.
- van Someren, V. G. L. and van Someren, G. R. C. The birds of Bwamba. *Uganda Journ.*, 13, suppl.

Notes on Tripolitanian Birds

by *Graham Bundy and John H. Morgan*

Received 27th June, 1969

The area comprises the former Italian province of Tripolitania, extending from the Mediterranean coast, south to about 28° N. and from the western border of Libya to 17° E. Large areas are difficult of access and impossible to cover adequately, such as the Hamada el Hamra or Red Desert, which lies east of Ghadames and south of the Jebel Nafusa. In contrast, roads have led to concentrated observations for the area adjoining the sea, and have made fairly thorough exploration possible in the Jebel Nafusa. The geography is given by Guichard (1956).

Our observations were of varying intensity between 15th July, 1964, and 1st July, 1967. We lived in or near Tripoli town for this period, and daily counts of birds were made, especially around Idris airport, 28 km. south of the coast. Frequent excursions were made to the Tunisian border in the west, as far as Sirte in the east, and to the Fezzan (Sebha oasis) in the south.

The following notes are intended to supplement the existing literature for the area, especially the more important works by Moreau (1961), Etchéco-par & Hue (1967) (E. & H.) and Heim de Balsac & Mayaud (1962) (H. de B. & M.). As Moreau says, the western half of Libya is better covered ornithologically by N. African standards, but the literature is still brief and sketchy, with the possible exception of Guichard (1957). With the exception of Snow & Manning (1954), Johnson (1949) and Cavazza (1932), no observations seem to have been made in autumn. Cavazza, however, never seems to have been present in August or September.

Our preoccupation with migrants rather overshadowed the study of breeding species. Future workers in this region might well consider concentrating on breeding birds. Of the 265 for which we can find records, we saw 235 species, 20 apparently new for the area. Our list includes 66 breeding species, six of which we found breeding for the first time. The general pattern of visible migration is as described by Moreau; migrants, especially